REMARKS

Reconsideration is requested.

Claims 1-99 have been canceled, without prejudice.

Claims 100-116 have been added. No new matter has been added. Claims 100-112, 117 and 118, are similar to now-canceled claims 49-54, 57, 87, 90, 92, 94, 96 and 98, respectively. Support for the additional recitations of claim 100, may be found, for example, on page 22 and Table 3 on page 67 of the specification. Moreover, the applicants note that the E2 protein is defined in the present specification as spanning amino acids 384-809 which is further defined by the regions of Table 3, page 57 of the specification. Support for claim 113 may be found, for example, in Example 7.4 and, more particularly, page 57, line 10-17, as well as Figure 38. Claim 114 is based on the disclosure of antibody 17H10F4A10 in, for example, Table 6 as well as the corresponding text. Attached is a copy of the Deposit Receipt and Viability Statement relating to the same.

Claim 115 recites the specific regions described in Table 3, page 57. The applicants respectfully submit that the individual regions do not define separately patentable inventions as the Examiner has already examined the whole of antibodies binding to any portion of the E2 polypeptide. Individual epitopes within the E2 polypeptide have therefore already been examined. See, for example, Mehta et al. (U.S. Patent No. 5,308,750), further discussed below. Finally, the subject matter of claim 116 is additionally described on page 22 of the specification. No new matter has been added.

Attached is a copy of the PCT applications (i.e., PCT/US93/00907; PCT/IT92/00081; PCT/US92/07189; and PCT/US91/08272), which were originally listed in the PTO-1449 Form, filed October 10, 2001, which the Examiner has returned with the Office Action of April 9, 2003, wherein these references have not been initialed as having been considered. The applicants note that these references were cited and considered in the parent application (Serial No. 08/612,973), as evidenced by the face of the corresponding U.S. patent (U.S. Patent No. 6,150,134), which the Examiner has indicated has been considered and made of record in the present case. See, the initialed PTO-1449 Form considered April 1, 2003, by the present Examiner and returned with a copy of the Office Action of April 9, 2003 (Paper No. 12). Accordingly, the Examiner's comments with regard to the previously filed Information Disclosure Statement failing to comply with 37 CFR §1.98(a)(2), in paragraph 2 of Paper No. 12 is incorrect. A legible copy of the foreign patents are not required where the same were cited in a parent application. The Patent Office file should be complete in this regard and the applicants have no control over nor should they bear the burden of keeping the Patent Office copy of related files complete. See, MPEP § 609. Moreover, the applicants should not bear the burden of additional costs and expenditure of and resources relating to providing further copies of references which presumably the Patent Office could obtain from their own resources. Out of a courtesy to the Examiner however the applicants attach further copies of the indicated requested documents. Return of an initialed copy of the PTO-1449 Form indicating consideration of the WO documents cited on the PTO-1449 Form filed October 10, 2001, pursuant to MPEP § 609, is respectfully requested.

The claims have been amended to define the elected subject matter. Examination of the claimed invention is requested. The applicants have again requested the specification be amended to include the priority information. See, the undersigned's Cover Sheet of October 10, 2001, wherein amendment of the specification has previously been requested. The Examiner is requested to assure that there is no duplication in this regard.

Consideration of the attached Information Disclosure Statement along with the cited references and return of the attached PTO-1449 Form, pursuant to MPEP § 609, are requested.

The new matter objection to the Amendment filed May 4, 2002, stated in paragraph 4 of Paper No. 12 is traversed. The Examiner's assertion is unfounded as the specification clearly describes the claimed subject matter. See, for example, page 7, line 34 and page 8, line 9 (80%); page 8, lines 1 and 10 (90%); page 8, lines 1 and 10 (95%); page 8, line 10 (97%); page 8, line 11 (99%) of the originally-filed specification. The Examiner is also requested to see claims 18 (97%), 20 (99%), 21 (80%), 22 (90%) and 23 (95%) of the parent patent, i.e., U.S. Patent No. 6,150,134, which is of record.

The Section 112, first paragraph, rejection of claims 87 and 89-99 stated in paragraph 5 of Paper No. 12 is moot in view of the above. To the extent the objected to language has been repeated in the above pending claim, the applicants note that the objected to language is specifically described in the originally-filed application as noted above. The claims are submitted to be supported by an adequate written description.

The Section 102 rejection of claims 49-54, 57-61 and 87-99 over Mehta (U.S. Patent No. 5,308,750) is moot in view of the above. The pending claims are submitted

to be patentable over Mehta which, at best, describes a monoclonal antibody which reacts with an epitope spanning amino acids 649-655 of the E2 region. See, column 6, lines 45-47 of Mehta. The monoclonal antibodies of the presently claimed invention are not taught or suggested by Mehta such that the pending claims are submitted to be patentable over the cited art.

The Section 102 rejection of claims 49-54, 57-61 and 87-99 over Kaito (Journal of General Virology (1994) 75, 1755-1760) is moot in view of the above. The Examiner is urged to appreciate that Kaito states that "each antibody [of the reference] reacted specifically with the HCV putative envelope protein and did not react with the putative core, E2/NS1 or NS2 proteins when expressed by RVV and baculovirus." See, page 1758, right column, last sentence of first full paragraph of the cited reference. Accordingly, Kaito does not teach or suggest the presently claimed invention.

The Section 102 rejection of claims 49-54, 57-61 and 87-99 over Watanabe (U.S. Patent No. 5,610,009) is moot in view of the above. The presently claimed invention is submitted to be patentable over Watanabe and consideration of the following comments in this regard is requested.

Watanabe et al. discloses a mammalian expression system for high level expression of an amyloid precursor protein (APP)-E1-E2 fusion protein. Watanabe et al. did not disclose the actual making/isolation/characterization of any antibody to any HCV protein. At most, Watanabe et al. describe that antibodies (monoclonal or polyclonal) **can** be generated using the fusion protein (column 10, lines 12-15) and that polyclonal antibodies **should** specifically bind to a specific HCV region (column 10, lines 33-36). Watanabe et al. refer to general texts for methods of making monoclonal or polyclonal

antibodies (see, column 10, lines 25-32) as opposed to. Neither the production nor characterization of poly- or monoclonal antibodies to any HCV protein is exemplified by Watanabe et al. As Watanabe fails to teach, literally or inherently, each aspect of the presently claimed invention, the claims are submitted to be novel and patentable over Watanabe. Finally, the Examiner has repeatedly referred in Paper No. 12 to the patentability of a monoclonal antibody allegedly being only dependent on the epitope which the monoclonal antibody recognizes. As no monoclonal antibodies were generated by Watanabe et al., epitopes binding to such monoclonal antibodies could by definition not be defined

The pending claims are submitted to be patentable over Watanabe.

The Section 102 rejections of claims 49-54, 57-61 and 87-99 over Houghton (EP 0388232 and GB 2212511) are moot in view of the above.

The pending claims are submitted to be patentable over the cited Houghton references and consideration of the following in this regard is requested.

Houghton et al. fails to teach, literally or inherently, the presently claimed invention. Houghton generally teaches, by reference to standard texts, methods of making antibodies (page 18, lines 43-50 of the EP document). Neither the production nor characterization of poly- or monoclonal antibodies to any HCV protein is specifically described or exemplified by Houghton et al. The Examiner has repeatedly referred in Paper No. 12 to the patentability of a monoclonal antibody allegedly being dependent on the epitope which the monoclonal antibody recognizes. As no monoclonal antibodies were generated by Houghton et al., (EP) epitopes binding to such monoclonal antibodies could by definition not be defined by Houghton.

As for Houghton (GB 2212511) similar deficiencies exist as outlined above with regard to Houghton (EP). More particularly, the making of monoclonal antibodies is explained in exactly the same wording as in Houghton et al. (EP 0 388 232), see page 45, lines 10-23. Houghton et al. (GB 2,212,511) also did not generate monoclonal antibodies to any HCV protein, or define any epitopes which may be bound thereby. Only a method for obtaining polyclonal antibodies to the HCV 5-1-1 protein (spanning amino acids 1694 to 1735 of the HCV polyprotein, (i.e., part of the NS4 protein) is disclosed in Example IV.F.1 on pages 121-122).

The pending claims are submitted to be patentable over the cited Houghton references.

The claims are submitted to be patentable and in condition for allowance and a Notice to this effect is requested.

Acceptance of the attached drawings is also requested.

The Examiner is requested to contact the undersigned if anything further is required in this regard.

Respectfully submitted,

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